



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,091	06/30/2000	David L Deitz	06005/36803	1769

7590 03/26/2004

Marshall O'Toole Gerstein Murray & Borun
6300 Sears Tower
233 South Wacker Drive
Chicago, IL 60606-6402

EXAMINER

ALI, SYED J

ART UNIT	PAPER NUMBER
----------	--------------

2127

10

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

h

Office Action Summary

Application No.

09/609,091

Applicant(s)

DEITZ ET AL.

Examiner

Syed J Ali

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2127

DETAILED ACTION

1. This office action is in response to Amendment A, paper number 8, which was filed January 30, 2004. Claims 1-50 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Objections

3. Claim 44 is objected to because of the following informalities:

In line 2 of claim 44, "containing" should read "contain".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 31-40 are rejected under 35 U.S.C. 102(e) as being anticipated by de Andrade, Jr. et al. (USPN 6,606,527) (hereinafter de Andrade).

Art Unit: 2127

As per claim 31, de Andrade teaches the invention as claimed, including a method of editing a batch process campaign including a plurality of batches for use in a process control system having a graphical user interface and a data store, the method comprising the steps of:

prompting a user to enter a first input via the graphical user interface identifying one or more unreleased batches from the batch process campaign (col. 4 lines 6-9, "The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time");

prompting the user to enter a second input via the graphical user interface specifying a change to batch information associated with the identified one or more unreleased batches (col. 4 lines 6-9, "The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time"); and

storing the change to the batch information together with the batch process campaign in the data store (col. 6 lines 5-9, "As the orders arrive, they must be specified technically and added to the database from which production planning and scheduling extract the information relevant to them", wherein the database stores all information pertaining to scheduled productions, including modifications made by the user).

As per claim 32, de Andrade teaches the invention as claimed, including the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter the second input while the batch process campaign is executing (col. 4 lines 6-9,

Art Unit: 2127

“The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time”).

As per claim 33, de Andrade teaches the invention as claimed, including the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter an input specifying a recipe change to the batch information (col. 4 lines 6-9, “The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time”, wherein any aspect of the production can be modified by the user, including the mixing recipe).

As per claim 34, de Andrade teaches the invention as claimed, including the method of claim 31, wherein the step of prompting the user to enter the first input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter an input specifying a parameter value change (col. 4 lines 6-9, “The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time”; col. 8 lines 8-11, “Since changes and unexpected events are inevitable, the plans can be revised...manually, via the Decision Support System”, wherein any aspect of the production can be modified by the user).

Art Unit: 2127

As per claim 35, de Andrade teaches the invention as claimed, including the method of claim 31, wherein the step of prompting the user to enter the second input via the graphical user interface specifying the change to the batch information associated with the identified one or more unreleased batches includes the step of prompting the user to enter an input specifying an additional batch to be added to the batch process campaign (col. 10 lines 57-61, "A new solution must be generated whenever the proposed scheduling clashes significantly with the plant situation. Examples of events that may require new scheduling [include]...insertion of new orders").

As per claims 36-40, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claims 31-35, respectively (col. 4 lines 31-46, "the present invention may be carried out on any suitable computer or computer network").

Claim Rejections - 35 USC § 103

6. Claims 1-2, 8, 10-11, 17, 41-44, 47-48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade.

As per claim 1, de Andrade teaches the invention as claimed including a method of creating a batch process campaign including a plurality of batches for use in a process control system having a batch creation function in communication with a database

Art Unit: 2127

containing batch information and a graphical user interface, the method comprising the steps of:

sending a first message requesting batch information to the batch creation function (col. 6 lines 35-62, "The plan generated by [the year planner] is reviewed and, via a Decision Support System interface, the impact of various scenarios on the objective function used can be tested. The final plan is published and stored for use as an initial platform for the lowest levels of planning");

receiving a second message containing a set of batch information in response to the first message requesting batch information (col. 7 line 64 - col. 8 line 7, "The allocation of capacity to the machines specified by the Year Plan is converted into weekly allocations, which form the basis of all the planning of the Master and Detailed Planner");

displaying the set of batch information using the graphical user interface (col. 3 lines 20-26, "Through a Graphical User Interface [GUI], which shows the campaign plan in a Gantt chart format, the user has the opportunity to make changes to the generated plan and view the implications of the changes");

generating a first input identifying a subset of the set of batch information from the set of batch information to be included within at least one batch from the plurality of batches (col. 8 lines 34-40, "Different products may require the same equipment in different ways. Thus, the allocation of equipment must be done in a balanced manner, just as the time in which the equipment is allocated to the product. Each product is associated with a load profile which gives how much the product consumes of each piece of equipment");

Art Unit: 2127

generating a second input specifying campaign information to be included within the batch process campaign (col. 8 lines 12-20, "the Year Planner supplies the ideal product mix for the next few months"); and

using the first and second inputs to create the batch process campaign (col. 8 lines 12-20, "Once the Year Planner supplies the ideal product mix for the next few months, this module analyses this mix and generates a sequence of production campaigns that the various plant equipment must follow").

Although de Andrade does not specifically teach that the user is prompted to enter the first and second inputs, such would have been obvious to one of ordinary skill in the art since de Andrade provides a user with the ability to modify the campaign or otherwise interact with the system (col. 4 lines 6-9, "The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time"). However, the detailed plan is originally generated by the system based on details within various databases that allows the system to generate the ideal production campaign to maximize profits and productivity. Nonetheless, under certain circumstances, profits and productivity may need to be sacrificed to meet other goals, in which case a user can manually make the necessary adjustments. Thus, although the system initially generates the inputs for the campaign plan, a user may enter inputs that supercede the system-generated parameters. Hereinafter, inputs entered by a user or inputs generated by the system are considered analogous in functionality, based on the discussion presented above.

As per claim 2, de Andrade teaches the invention as claimed, including the method of claim 1, wherein the step of sending the first message requesting batch information includes the step of requesting recipe information (col. 7 lines 10-16, “[The optimizer] module generates the value of the objective function for the best alternative of all the possibilities, i.e. it generates the optimum solution. It also generates a sensitivity analysis enabling the identification of which variables, parameters and constraints are causing greater impact on the objective function”, wherein the variables, parameters, and constraints correspond to the recipe for a production).

As per claim 8, de Andrade teaches the invention as claimed, including the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify a parameter value associated with a process step (col. 7 lines 10-16, “[The optimizer] module generates the value of the objective function for the best alternative of all the possibilities, i.e. it generates the optimum solution. It also generates a sensitivity analysis enabling the identification of which variables, parameters and constraints are causing greater impact on the objective function”).

As per claims 10-11 and 17, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein

Art Unit: 2127

the system performs the method of claims 1-2 and 8, respectively (col. 4 lines 31-46, “the present invention may be carried out on any suitable computer or computer network”).

As per claim 41, de Andrade teaches the invention as claimed, including a batch process campaign management system for use in a process control system, comprising:

a batch executive including a batch information database (col. 6 lines 5-9, “As the orders arrive, they must be specified technically and added to the database from which production planning and scheduling extract the information relevant to them”, wherein the database stores all information pertaining to scheduled productions, including modifications made by the user); and

a campaign manager communicatively coupled to the batch executive that exchanges messages with the batch executive, wherein the messages contain batch-related information from the batch information database and campaign-related information generated by the campaign manager (col. 8 lines 12-20, “Once the Year Planner supplies the ideal product mix for the next few months, [the Campaign Generator] analyses this mix and generates a sequence of production campaigns that the various plant equipment must follow in order to produce these products in an optimized manner”).

Although de Andrade does not specifically teach that campaign-related information generated by the campaign manager is in response to a user input, such would have been obvious to one of ordinary skill in the art for reasons discussed above in reference to claim 1.

Art Unit: 2127

As per claim 42, de Andrade teaches the invention as claimed, including the system of claim 41, wherein the batch executive further includes a batch definition/instantiation function (col. 6 lines 48-57, "Detailed by each type of product that the plant can produce, an objective function is defined such that it can express the overall profitability of the plant for any product mix. The best product mix is that which maximizes this objective function, meeting all the constraints imposed").

As per claim 43, de Andrade teaches the invention as claimed, including the system of claim 41, further comprising a graphical user interface that is communicatively coupled to the campaign manager, and wherein the campaign manager includes a campaign creation function, a campaign execution function and a campaign editing function (col. 3 lines 20-26, "Through a Graphical User Interface [GUI], which shows the campaign plan in a Gantt chart format, the user has the opportunity to make changes to the generated plan and view the implications of the changes").

As per claim 44, de Andrade teaches the invention as claimed, including the system of claim 43, wherein the campaign creation function displays batch information using the graphical user interface and the messages contain batch-related information (col. 4 lines 19-24, "The system is composed by a graphical user interface with several screens", wherein the graphical user interface displays information relating to the scheduled productions as well as those that are on-going).

Art Unit: 2127

As per claim 47, de Andrade teaches the invention as claimed, including the system of claim 41, wherein the batch-related information includes recipe information (col. 7 lines 10-16, “[The optimizer] module generates the value of the objective function for the best alternative of all the possibilities, i.e. it generates the optimum solution. It also generates a sensitivity analysis enabling the identification of which variables, parameters and constraints are causing greater impact on the objective function”, wherein the variables, parameters, and constraints correspond to the recipe for a production).

As per claim 48, de Andrade teaches the invention as claimed, including the system of claim 41, wherein the batch-related information includes parameters associated with process steps (col. 7 lines 10-16, “[The optimizer] module generates the value of the objective function for the best alternative of all the possibilities, i.e. it generates the optimum solution. It also generates a sensitivity analysis enabling the identification of which variables, parameters and constraints are causing greater impact on the objective function”).

As per claim 50, de Andrade teaches the invention as claimed, including the system of claim 41, wherein the campaign manager automatically sends messages to a batch historian that maintains historical campaign information (col. 6 lines 5-9, “As the orders arrive, they must be specified technically and added to the database from which production planning and scheduling extract the information relevant to them”, wherein the database stores information relating to current and past production schedules) and a security system that controls user access (col. 3 lines 15-19, “Except by the GUI,

Art Unit: 2127

everything else is located in a server that runs under UNIX”, wherein secure user access is a well known aspect of UNIX programming).

7. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Allen et al. (previously cited) (hereinafter Allen).

As per claim 3, Allen teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically the method of claim 2, wherein the step of requesting the recipe information includes the step of requesting recipe information associated with a setup batch (col. 7 lines 10-30, “master control module 204 is configured to download setup data, e.g., processing recipes, to application control modules 202 in response to the initiation of the wafer processing procedure”).

It would have been obvious to one of ordinary skill in the art to combine de Andrade and Allen since the use of a setup batch would allow for the production to be initialized such that the equipment may be properly prepared for a specific type of production, thereby eliminating potential contamination or other adverse consequences.

As per claim 12, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claim 3 (col. 4 lines 31-46, “the present invention may be carried out on any suitable computer or computer network”).

Art Unit: 2127

8. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Guldi (USPN 6,488,037).

As per claim 4, Guldi teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically the method of claim 2, wherein the step of requesting the recipe information includes the step of requesting recipe information associated with a cleanup batch (col. 3 lines 8-24, "The present invention may be implemented into a chemical bath cleanup, either a single wafer cleanup or a batch cleanup, by way of a programmable controller applied to the generation of physical action").

It would have been obvious to one of ordinary skill in the art to combine de Andrade and Guldi since the use of a cleanup batch to flush out the production components would reduce the chances for contamination between batches.

As per claim 13, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claim 4 (col. 4 lines 31-46, "the present invention may be carried out on any suitable computer or computer network").

9. Claims 5, 14, 19-23, 25-29, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Asano et al. (previously cited) (hereinafter Asano).

As per claim 5, Asano teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify a batch execution mode (col. 5 lines 24-35, "This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer").

It would have been obvious to one of ordinary skill in the art to combine de Andrade and Asano since the specification of various modes of execution allows the same system to perform various types of tasks. This not only allows the operator of the system to indicate the most appropriate mode of execution at execution time, but it also allows the designers of the system to increase the scalability of the system to meet multiple goals, since the system is capable of switching between various types of jobs.

As per claim 14, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claim 5 (col. 4 lines 31-46, "the present invention may be carried out on any suitable computer or computer network").

As per claim 19, de Andrade teaches the invention as claimed, including a method of executing a batch process campaign including a plurality of batches for use in a process control system having a batch execution function, the method comprising the steps of:

releasing one or more batches from the plurality of batches to the batch execution function (col. 10 lines 35-52, "The scheduling process begins with the selection of orders for a specific week"); and

sending messages to the batch execution function to cause the batch execution function to execute one or more of the released batches (col. 13 lines 20-25, "The transport function completes the production process of an order in the plant").

Asano teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically:

determining a batch execution mode associated with the process campaign and executing the batches based on the execution mode (col. 5 lines 24-35, "This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer").

As per claim 20, de Andrade teaches the invention as claimed, including the method of claim 19, wherein the step of releasing the one or more batches from the plurality of batches to the batch execution function based on the batch execution mode includes the step of releasing a ready batch prior to the complete execution of a currently

Art Unit: 2127

executing batch (col. 10 lines 35-52, "The scheduling process begins with the selection of orders for a specific week", wherein the production is ongoing).

As per claim 21, Asano teaches the invention as claimed, including the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the one or more of the released batches includes the step of sending a message to cause the batch execution function to execute the one or more released batches according to the batch execution mode (col. 5 lines 24-35, "This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer").

As per claim 22, de Andrade teaches the invention as claimed, including the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the one or more of the released batches includes the step of sending a message specifying a parameter value associated with a process step associated with the one or more of the released batches step (col. 4 lines 6-9, "The user can modify an order manually and replan it. The entire detailed plan can be replanned by the user at any time"; col. 8 lines 8-11, "Since changes and unexpected events are inevitable, the plans can be revised...manually, via the Decision Support System", wherein any aspect of the production can be modified by the user).

Art Unit: 2127

As per claim 23, de Andrade teaches the invention as claimed, including the method of claim 19, wherein the step of sending the messages to the batch execution function to cause the batch execution function to execute the one or more of the released batches includes the step of sending a message specifying a recipe associated with the one or more of the released batches step (col. 7 lines 10-16, “[The optimizer] module generates the value of the objective function for the best alternative of all the possibilities, i.e. it generates the optimum solution. It also generates a sensitivity analysis enabling the identification of which variables, parameters and constraints are causing greater impact on the objective function”, wherein the variables, parameters, and constraints correspond to the recipe for a production).

As per claims 25-29, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claims 19-23, respectively (col. 4 lines 31-46, “the present invention may be carried out on any suitable computer or computer network”).

As per claim 49, de Andrade teaches the invention as claimed, including the system of claim 41, wherein the campaign-related information includes a batch execution mode (col. 5 lines 24-35, “This system is designed to select the apparatus mode, the recipe management mode, or the host mode. This mode selection is performed by, for example, the mode selector 24 of the apparatus controller M or the mode selector 44 of the host computer”).

10. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Hohkibara et al. (previously cited) (hereinafter Hohkibara).

As per claim 6, Hohkibara teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify a maximum number of active batches (col. 2 line 65 - col. 3 line 7, "it is highly desirable to charge the processing machine with the maximum number of lots that are allowed to be set in the machine, so as to improve the performance or efficiency of the machine", wherein the citation refers to prior art that teaches of indicating a maximum number of active lots that are possible for the production system to process).

It would have been obvious to one of ordinary skill in the art to combine de Andrade with Hohkibara since it would allow the user to specify a threshold that ensures that the system does not exceed its capabilities. For example, if some sort of error were to occur during the manufacturing process, specifying a maximum number of batches to produce would ensure that a large number of batches are not defective. This would allow user intervention at a point where recovery could occur early enough that the problem does not cause undue waste of resources.

Art Unit: 2127

As per claim 16, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claim 6 (col. 4 lines 31-46, "the present invention may be carried out on any suitable computer or computer network").

11. Claims 7, 9, 15, 18, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Sargent (previously cited).

As per claim 7, Sargent teaches the invention as claimed, including the following limitation not shown by de Andrade, specifically the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included with the batch process campaign includes the step of prompting the user to specify a number of batches within the batch process campaign (col. 3 lines 39-60, "the display row 50 begins a scrolling operation and sequentially displays the...number of batches which will be required to make up the load and the name of the customer who is to receive the load. As the operation progresses the operator is able to verify that he has entered the correct number").

It would have been obvious to one of ordinary skill in the art to combine de Andrade with Sargent since automating the process of batch production to the point where there is no control over the number of batches may cause a waste in resources. Specifically, if only a few batches need to be produced, but the system is automated such that hundreds of batches are produced at a time, the excess may be wasted. By allowing

Art Unit: 2127

the user to specify the number of batches as suggested by Sargent, the system can make most efficient use of resources by only producing the number of batches necessary.

As per claim 9, Sargent discloses the method of claim 1, wherein the step of prompting the user to enter the second input specifying campaign information to be included within the batch process campaign includes the step of prompting the user to specify batch identification information (col. 3 lines 39-60, “the display row 50 begins a scrolling operation and sequentially displays the load number entered by the operator”, wherein the load number identifies the specific batch).

As per claims 15 and 18, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claims 7 and 9, respectively (col. 4 lines 31-46, “the present invention may be carried out on any suitable computer or computer network”).

As per claim 45, Sargent discloses the system of claim 44, wherein the campaign creation function processes user inputs identifying a set of the displayed batch information to be included within a batch process campaign (col. 3 lines 39-60, “the display row 50 begins a scrolling operation and sequentially displays the load number entered by the operator”, wherein the load number identifies the specific batch).

Art Unit: 2127

As per claim 46, Allen discloses the system of claim 45, wherein the batch process campaign includes multiple types of batches (col. 6 line 62- col. 7 line 9, "It should be appreciated that each processing station may be associated with more than one sub-procedure and/or governed by more than one processing recipe").

12. Claims 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Andrade in view of Asano in view of Hohkibara.

As per claim 24, Hohkibara teaches the invention as claimed, including the following limitations not shown by de Andrade, specifically the method of claim 19, wherein the step of releasing the one or more batches from the plurality of batches to the batch execution function based on the batch execution mode includes the step of releasing the one or more batches from the plurality of batches according to a user specified maximum number of active batches (col. 2 line 65 - col. 3 line 7, "it is highly desirable to charge the processing machine with the maximum number of lots that are allowed to be set in the machine, so as to improve the performance or efficiency of the machine", wherein the citation refers to prior art that teaches of indicating a maximum number of active lots that are possible for the production system to process).

It would have been obvious to one of ordinary skill in the art to combine de Andrade with Hohkibara since it would allow the user to specify a threshold that ensures that the system does not exceed its capabilities. For example, if some sort of error were to occur during the manufacturing process, specifying a maximum number of batches to produce would ensure that a large number of batches are not defective. This would allow

Art Unit: 2127

user intervention at a point where recovery could occur early enough that the problem does not cause undue waste of resources.

As per claim 30, de Andrade teaches the invention as claimed, including a system comprising a computer readable medium and a plurality of routines stored on the computer readable medium adapted to be executed by a processor, wherein the system performs the method of claim 24 (col. 4 lines 31-46, "the present invention may be carried out on any suitable computer or computer network").

Response to Arguments

13. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new grounds of rejection.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,684,117 to Bacin et al. teaches a method of scheduling a production.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (703) 305-8106. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2127

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali
March 18, 2004



MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100